

CLAIMS

What is claimed is:

1. A method to determine a channel quality metric in a wireless communication system, comprising:

making a measurement from a forward channel to obtain a measurement result value, quantizing the measurement result value in accordance with an N level quantization to obtain a code, and reporting the code on a reverse channel;

converting the reported code to a number;

comparing the number to a threshold; and

if the comparison indicates that the number may not accurately reflect the measurement result value, adjusting the number using an adjustment factor.

2. A method as in claim 1, where the adjustment factor is a constant.

3. A method as in claim 1, where the wireless communications system comprises a base station and a mobile station, and where the adjustment factor has a value that is a function of a distance between the base station and the mobile station.

4. A method as in claim 1, where the wireless communications system comprises a base station and a mobile station, and where the adjustment factor has a value that is determined by the mobile station and reported to the base station.

5. A method as in claim 4, where the adjustment factor is computed by the mobile station by:

during a period of time when the obtained codes do not accurately reflect the actual measurement result values, determining a difference between individual ones of actual

measurement result values and a threshold measurement result value;

averaging the difference values; and

reporting the average of the difference values as the adjustment factor to the base station.

6. A method as in claim 1, where N is equal to 16.

7. A method as in claim 1, where the threshold is equal to -16.25dB.

8. A method as in claim 5, where the threshold measurement result value is equal to -15.5dB.

9. A method as in claim 1, where making a measurement from the forward channel measures a pilot channel.

10. A method as in claim 9, where making a measurement determines a value for $(E_c/N_t)_{\text{Pilot}}$.

11. A method as in claim 4, where reporting the value of the adjustment factor to the base station occurs at intervals that are longer than intervals between the mobile station making a full channel quality indicator (CQI) report to the base station.

12. A method as in claim 5, where reporting the average of the difference values as the adjustment factor to the base station occurs at intervals that are longer than intervals between the mobile station making a full channel quality indicator (CQI) report to the base station.

13. A method as in claim 4, where reporting the value of the adjustment factor to the base station occurs at intervals that are specified to the mobile station in signaling received from the base station.

14. A wireless communication system, comprising:

a mobile station comprising circuitry and a computer program controlling operation of the circuitry to make a measurement from a forward channel to obtain a measurement result value, to quantize the measurement result value in accordance with an N level quantization to obtain a code, and to report the code on a reverse channel; and

a base station comprising circuitry and a computer program controlling operation of the circuitry to convert the code to a number, to compare the number to a threshold and, if the comparison indicates that the number may not accurately reflect the measurement result value, to adjust the number using an adjustment factor.

15. A wireless communication system as in claim 14, where the adjustment factor is a constant.

16. A wireless communication system as in claim 14, where the adjustment factor has a value that is a function of a distance between the base station and the mobile station.

17. A wireless communication system as in claim 14, where the adjustment factor has a value that is determined by the mobile station and reported to the base station.

18. A wireless communication system as in claim 17, where the circuitry and the computer program controlling operation of the circuitry of the mobile station determines the value of the adjustment factor by being responsive to a period of time when the obtained codes do not accurately reflect the actual measurement result values to determine a difference between individual ones of actual measurement result values and a threshold measurement result value; to average the difference values; and to report the average of the difference values as the adjustment factor to the base station.

19. A wireless communication system as in claim 14, where N is equal to 16.

20. A wireless communication system as in claim 14, where the threshold is equal to -16.25dB.

21. A wireless communication system as in claim 18, where the threshold measurement

result value is equal to -15.5dB.

22. A wireless communication system as in claim 14, where the mobile station circuitry and computer program controlling operation of the circuitry makes a measurement from a pilot channel.

23. A wireless communication system as in claim 14, where the mobile station circuitry and computer program controlling operation of the circuitry determines a value for $(E_c/N_t)_{\text{Pilot}}$.

24. A wireless communication system as in claim 17, where the mobile station reports the value of the adjustment factor to the base station at intervals that are longer than intervals between the mobile station making a full channel quality indicator (CQI) report to the base station.

25. A wireless communication system as in claim 17, where the mobile station reports the average of the difference values as the adjustment factor to the base station at intervals that are longer than intervals between the mobile station making a full channel quality indicator (CQI) report to the base station.

26. A wireless communication system as in claim 17, where the mobile station reports the value of the adjustment factor to the base station at intervals that are specified to the mobile station in signaling received from the base station.

27. A network infrastructure component of a wireless communication system, comprising circuitry and a computer program controlling operation of the circuitry to receive a code from a mobile station, the code being indicative of a quantized result of a measurement result value obtained from a forward channel, to convert the code to a number, to compare the number to a threshold and, if the comparison indicates that the number may not accurately reflect the measurement result value, to adjust the number using an adjustment factor.

28. A network infrastructure component as in claim 27, where the adjustment factor is a constant.

29. A network infrastructure component as in claim 27, where the adjustment factor has a value that is a function of a distance between a base station and the mobile station.

30. A network infrastructure component as in claim 27, where the adjustment factor has a value that is determined by the mobile station and reported to a base station.

31. A mobile station component of a wireless communication system, comprising circuitry and a computer program controlling operation of the circuitry to make a measurement from a forward channel to obtain a measurement result value, to quantize the measurement result value in accordance with an N level quantization to obtain a code, to report the code on a reverse channel to a wireless communication system infrastructure component, and to determine a value of an adjustment factor for use by the infrastructure component when processing the code by being responsive to a period of time when the obtained codes do not accurately reflect actual measurement result values to determine a difference between individual ones of actual measurement result values and a threshold measurement result value, to average the difference values and to report the average of the difference values as the adjustment factor to the infrastructure component.

32. A mobile station component as in claim 31, where N is equal to 16 and where the threshold measurement result value is equal to -15.5dB.

33. A mobile station component as in claim 31, where the measurement is made from a pilot channel to determine a value for $(E_c/N_t)_{\text{Pilot}}$.

34. A mobile station component as in claim 31, where the mobile station component reports the value of the adjustment factor at intervals that are longer than intervals between the mobile station making a full channel quality indicator (CQI) report.

35. A wireless communication system as in claim 31, where the mobile station component reports the value of the adjustment factor at intervals that are specified to the mobile station component in signaling received from a base station.